

# SERVICE MANUAL



## PORTABLE RADIO

# RP 8260UM



### SPECIFICATIONS

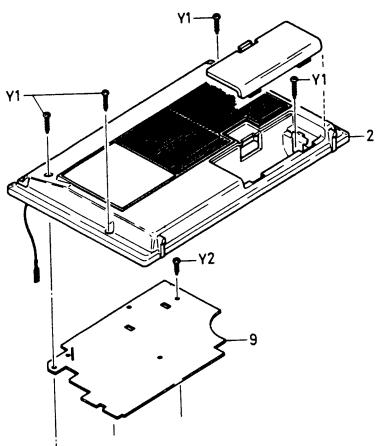
Frequency ranges:	LW 150 — 285 kHz MW 525 — 1605 kHz SW 5.95 — 18.0 MHz FM 87.5 — 108 MHz	Output power: Transistor: 11 Diode: 16	Maximum Undistorted 1300 mW Power source: DC 4.5 for 1.5V "UM-1" Size x 3 AC 120/220V, 50/60 Hz
Intermediate:	LW/MW/SW 470 kHz FM 10.7 MHz	Power source:	No signal 30 mA Speaker: 92 mm, 8 ohm
Sensitivity: (for 50mW output)	LW 400µV/m MW 100µV/m SW 25µV/m FM 3µV	Current consumption: Dimensions: Weight	257mm(W) x 162mm(H) x 75mm(D) Approx. Approx. 1.5 kg

NOTE: Specifications are subject to change without notice.

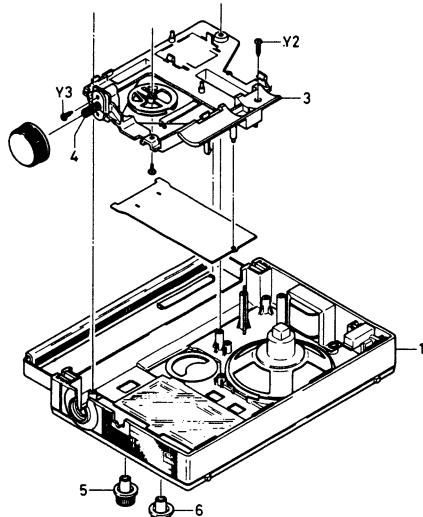
## CABINET & CHASSIS DISSASSEMBLY

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1. Remove the four screws Y1 (tapping screw pan head 3 x 20 mm) attaching the BACK LID (2) to the CABINET (1).
2. Unplug the antenna cord from the antenna socket (9) on the Printed Circuit Board to separate the BACK LID (2).
3. Detach the VOLUME KNOB (5) and the TONE KNOB (6).



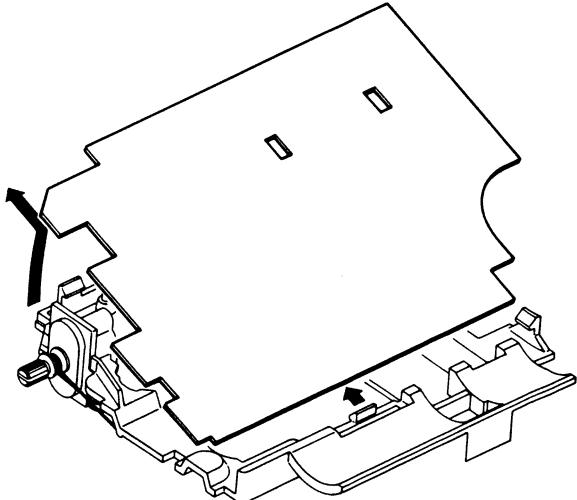
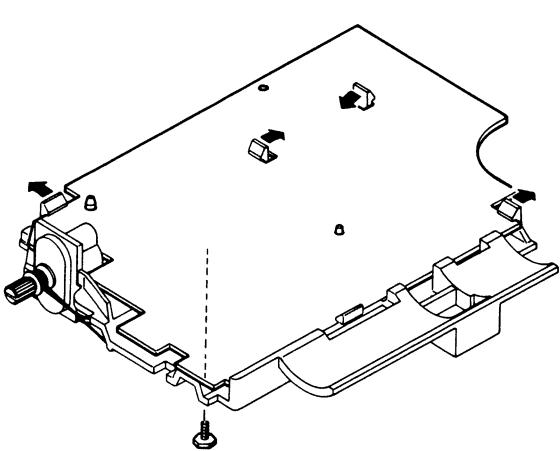
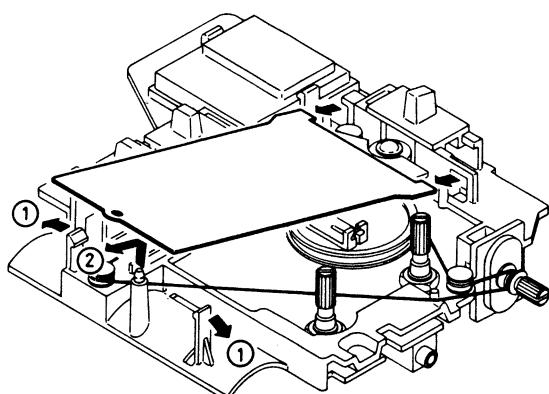
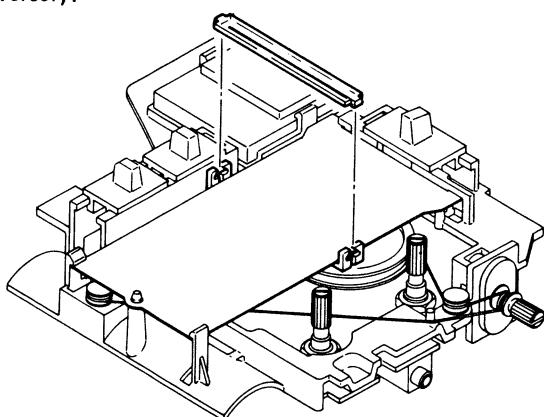
4. Remove the two screws Y2 (tapping screw pan head 16 mm) attaching the CHASSIS (3) to the CABINET (1).  
The CHASSIS with P.C.Board can be separated.
5. Detach the POINTER (7) and DIAL SCALE (8).
6. Remove the one screw Y3 (tapping screw pan head 3 x 10 mm) for disassembling the TUNING SHAFT ASSEMBLY (4) from the CHASSIS (3).



## P.C.B. DISASSEMBLY

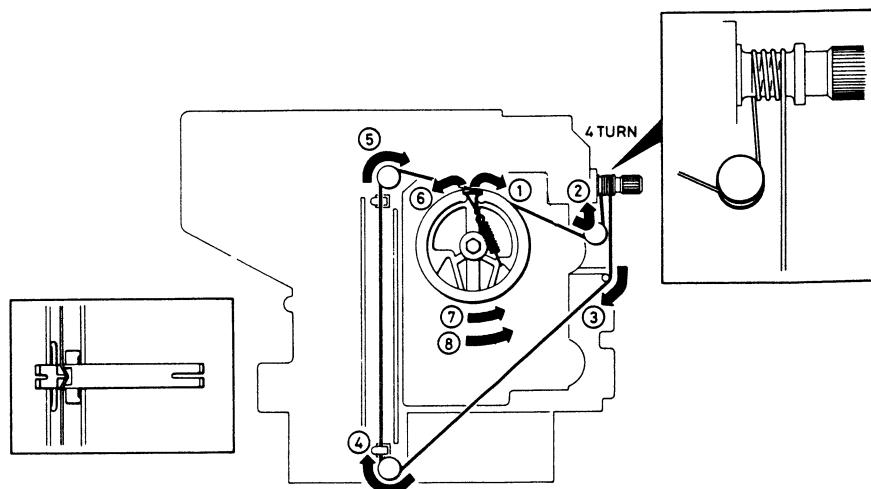
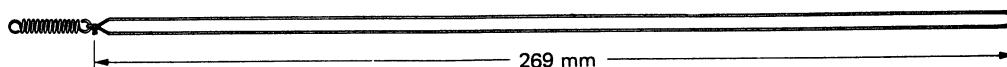
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Before removing the screws from the dial drum, secure it with string so that the dial rope will not come off adversely.



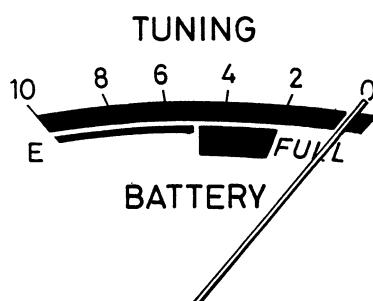
## DIAL CORD STRINGING

1. Prepare dial cord and tension spring as shown bellow.
2. First place the drum in such a position as it provides a minimum capacitance for tuning gang.  
Hook a free end of the spring to the drum and thread the cord as shown by starting from No. 1 through No. 8.  
Please give if four-turns around a tuning shaft at No. 2.  
Pass it through No. 3 & 4, and hold it temporarily at No. 5.  
Fit the other end No. 8 of the cord two turns in the arrow direction around the drum and finally.



## METER ADJUSTMENT SPECIFICATION

1. **Adjustment of battery meter**
  - 1-1. Set band selector to MW.
  - 1-2. Adjust with no signal at "zero" input.
  - 1-3. Turn variable resistor R330 (2KB) to adjust needle to full scale (see sketch).



- 1-5. After the adjustment, make sure the needle registers in the green range at 3.2 V DC.
2. **Checking of tuning meter**
  - 2-1. Set supply voltage to 4.5 V DC.
  - 2-2. Set band selector to FM, and tune in to 98 MHz, 40 dB by means of signal generator.
  - 2-3. Make sure the maximum meter swing coincides with the maximum output.
  - 2-4. If out of agreement, develop the output to maximum and adjust the meter swing to the maximum by turning the IF Transformer T303.
  - 2-5. In case an extreme deviation is found at item 2-3, readjust V-curve and S-curve.

## ALIGNMENT PROCEDURES

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### GENERAL ALIGNMENT CONDITIONS

1. The position of volume control is at maximum position.
2. Signal input must be kept as low as possible to avoid overload.
3. Use an output meter of the highest possible sensitivity.
4. Standard modulation is 400Hz at 30% amplitude (for AM) and 22.5 kHz deviation (for FM).

#### LW BAND – Band selector switch in LW position

Step	Connection of Signal Generator	Input Signal Frequency	Dial Setting of Radio	Connection of Output Meter	Adjust	Remarks
1	Loop Antenna	470 kHz	Lowest End	Across Speaker	IFT T305, 306, 307	Adjust for Maximum
2	Same	145 kHz	Lowest End	Same	Osc. Coil L112	Same
3	Same	295 kHz	Highest End	Same	Osc. Trim CT 104	Same
4	Same	160 kHz	160 kHz	Same	Ant. Coil L109b	Same
5	Same	280 kHz	280 kHz	Same	Ant. Trim CT102	Same

Repeat steps 2 thru 5 to obtain maximum sensitivity.

#### MW BAND – Band selector switch in MW position

Step	Connection of Signal Generator	Input Signal Frequency	Dial Setting of Radio	Connection of Output Meter	Adjust	Remarks
1	Same	505 kHz	Lowest End	Same	Osc. Coil L111	Same
2	Same	1650 kHz	Highest End	Same	Osc. Trim VCT4	Same
3	Same	600 kHz	600 kHz	Same	Ant. coil L109a	Same
4	Same	1400 kHz	1400 kHz	Same	Ant. Trim VCT3	Same

Repeat steps 1 thru 4 to obtain maximum sensitivity.

#### SW BAND – Band selector switch in SW position

Step	Connection of Signal Generator	Input Signal Frequency	Dial Setting of Radio	Connection of Output Meter	Adjust	Remarks
1	Same	5.8 MHz	Lowest End	Same	Osc. Coil L110	Same
2	Same	19 MHz	Lowest End	Same	Osc. Trim CT103	Same
3	Same	6.5 MHz	6.5 MHz	Same	Ant. coil L108	Same
4	Same	17.5 MHz	17.5 MHz	Same	Ant. Trim CT101	Same

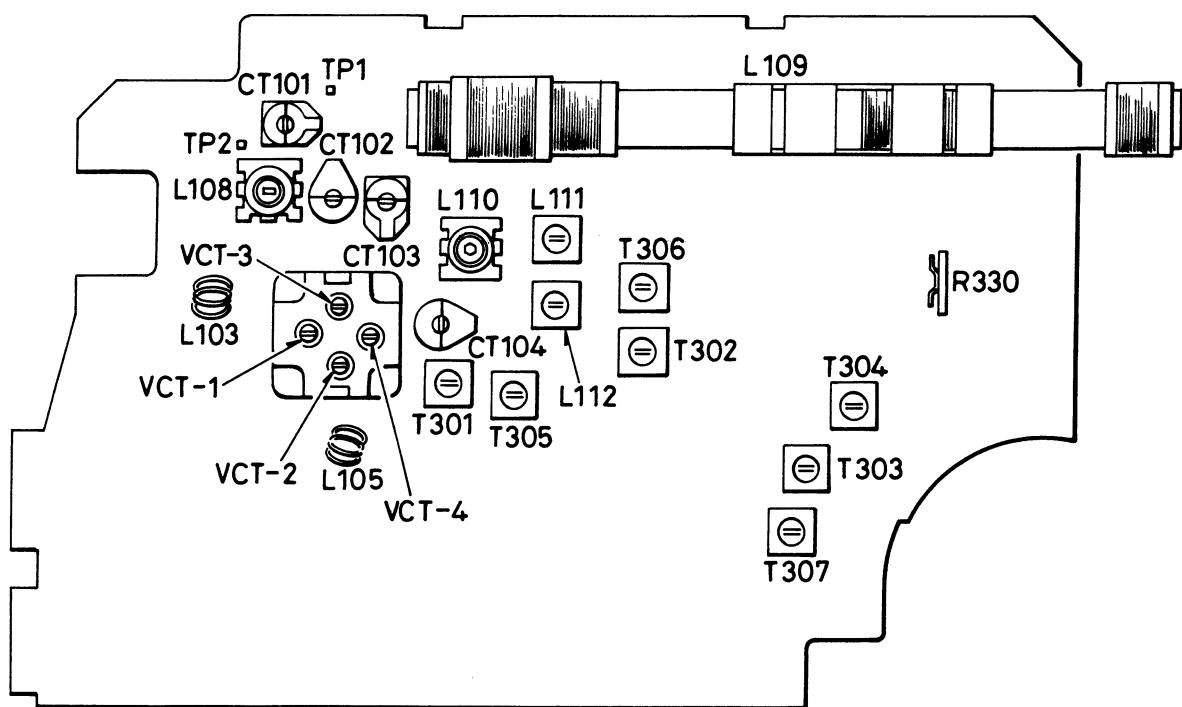
Repeat steps 1 thru 4 to obtain maximum sensitivity.

#### FM BAND – Band selector switch in FM position

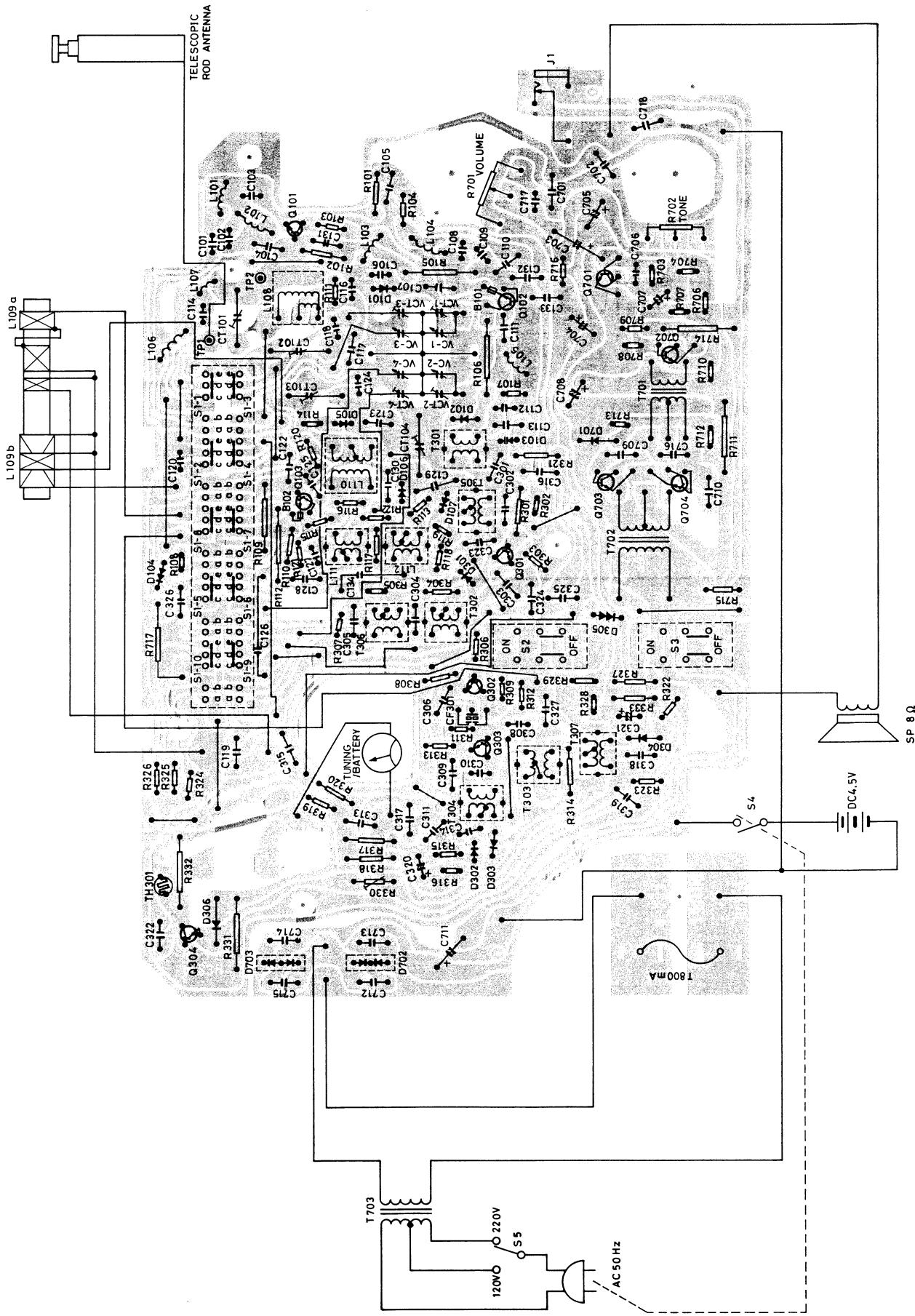
Step	Connection of Signal Generator	Input Signal Frequency	Dial Setting of Radio	Connection of Meter or Oscilloscope	Adjust	Remarks
1	Connect Sweep Marker Generator to VCT2, Ground	10.7 MHz	Lowest End	Connect scope input cable thru network to R314, Ground	IFT T301, 302, 303	Adjust for maximum sensitivity with symmetrical curve.
2	Same	10.7 MHz	Lowest End	Connect scope input cable thru network to R319, Ground	IFT T304	Adjust for symmetrical "S" curve.
3	Connect Signal Generator to TP1, TP2	87.0 MHz	Lowest End	Connect V.T.V.M. across speaker	Osc. coil L109	Adjust for maximum
4	Same	109.0 MHz	Highest End	Same	Osc. Trimmer VCT2	Same
5	Same	90 MHz	90 MHz	Same	RF Coil L103	Same
6	Same	106 MHz	106 MHz	Same	RF Trimmer VCT1	Same

Repeat steps 3 thru 6 to obtain maximum sensitivity.

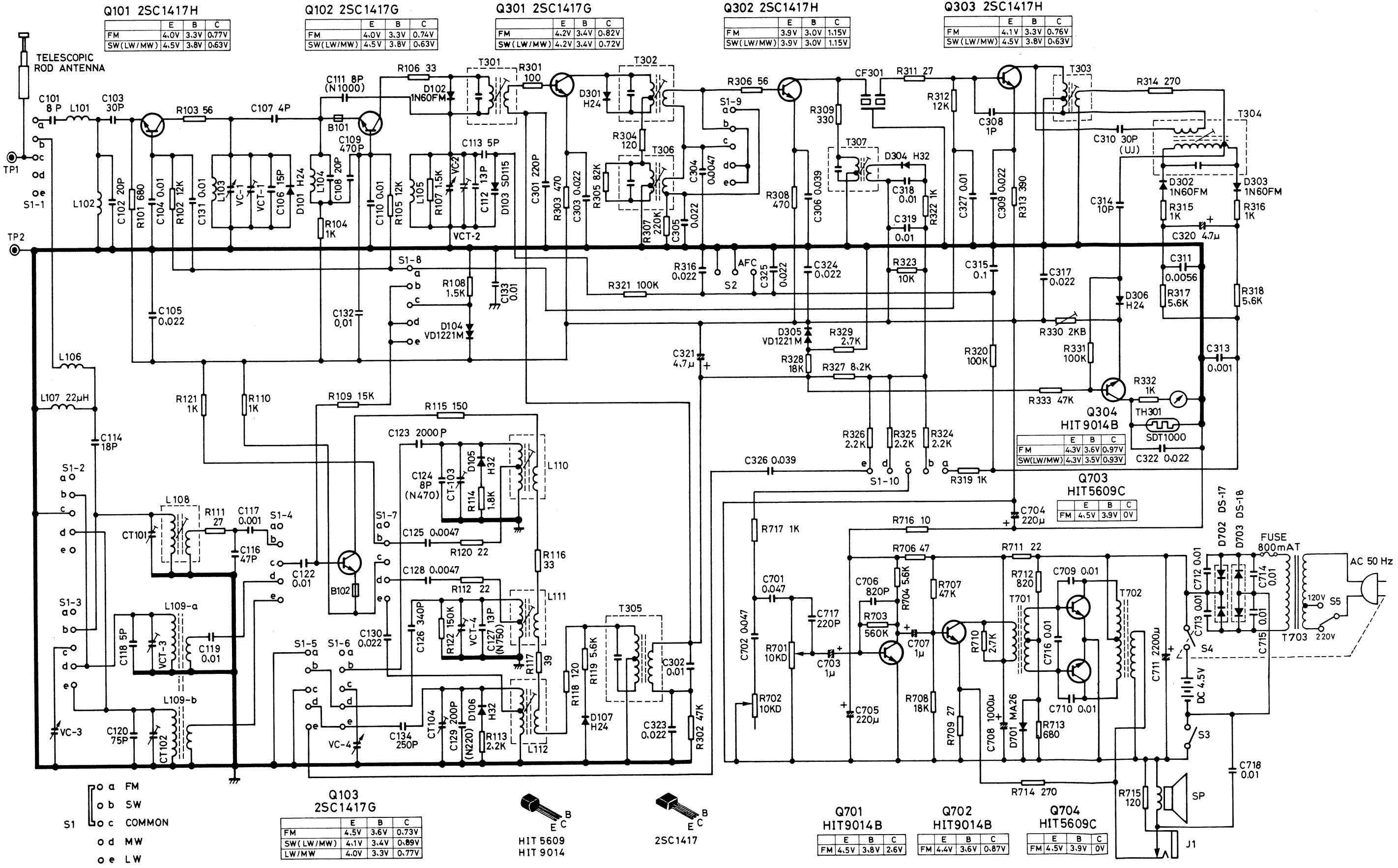
PARTS LOCATION



# WIRING DIAGRAM



## SCHEMATIC DIAGRAM



S2 ... AFC SWITCH

S3 ... POWER SWITCH

S4 ... AC / DC SWITCH

S5 ... VOLTAGE SELECT SWITCH

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKINGS PARTS			
	141-6-410T-17009	Instruction Manual	1
	141-6-132T-92806	Individual Carton	1
	141-6-144T-50700	Pad	1
	141-6-144T-50800	Pad	1
	141-6-231T-25400	Polyethylen Bag, Set	1
	141-6-231T-10250	Polyethylen Bag, Power Cord	1
CABINET & CHASSIS PARTS			
	141-0-111T-37205	Cabinet Assembly	1
	141-0-126T-25909	Back Lid Assembly	1
	141-0-128T-13101	Battery Lid Assembly	1
	141-2-447T-25800	Cushion, 15 x 15 x 2 mm, for Speaker	1
	141-2-447T-00800	Cushion, for Back Lid	2
	141-0-171T-14500	Handle Assembly	1
	141-2-271T-14700	Bracket Handle	2
	141-2-163T-54900	Rotary Knob, Tuning	1
	141-2-163T-55000	Rotary Knob, Volume & Tone	1
	141-0-311T-30000	Chassis Assembly	1
	141-0-566T-04610	Tuning Shaft Assembly	1
	141-2-146T-19204	Dial Scale	1
	141-2-164T-23600	Slide Knob, Band	1
	141-2-164T-23700	Slide Knob, Power	1
	141-2-164T-23701	Slide Knob, AFC	1
	141-2-538T-09700	Drum	1
	141-2-513T-04300	Carriage	1
	141-2-511T-14500	Pointer	1
	141-2-340T-00100	Dial Rope, 0.3φ x 700 mm	1
	123-2-481R-00600	Spring Coil	1
	141-2-447T-00800	Cushion, Dial Scale mrg.	2
	141-2-447T-62000	Cushion, meter mtg.	3
	141-2-447T-00801	Cushion, Dial Scale mtg.	2
FIXING PARTS			
		Tapping Screw (WH), 3 x 8 mm	2
		Tapping Screw, 3 x 10 mm	1
		Pan Head Tapping Screw, 3 x 8 mm	1
		Pan Head Tapping Screw, 3 x 20 mm	4
		Pan Head Tapping Screw, 3 x 10 mm	2
		Pan Head Screw, 2.6 x 4 mm	2
		Hexagon Head Bolt, 2.6 x 6mm	1
		Pan Head Tapping Screw, 3 x 10 mm	1
		Washer, 3 x 6.5 x 0.45 mm	1
ELECTRICAL PARTS			
S4	141-4-233T-34201	P.C.B. Assembly, Radio	1
	141-4-233T-39400	P.C.B. Assembly, Fuse	1
	4-300T-09000	Power Transformer	1
	4-235T-26971	Socket, AC/DC	1
	4-243T-77900	Power Cord	1
	4-151T-28671	Speaker, 92 mm, 8 ohm	1
	4-511T-08094	Meter, TUNING/BATTERY	1
	4-244T-80500	Rod Antenna	1
	4-231T-37607	Slide Switch, Voltage Select Switch	1
S5	123-2-472R-11100	Lug	1
	4-235T-34600	Socket, for FM ANT	1
	141-2-464T-08700	Fixer	2
	4-222T-68200	Variable Resistor, 10K ohm, "D"	2
	4-222T-41073	Semi-fixed Variable Resistor	1
	4-224T-12200	Tuning Capacitor	1
	141-2-381T-04200	Bracket Fuse	2
	4-237T-00100	Terminal	2
	4-234T-01971	Fuse, 800 mA	1
R701, 702			
R330			

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
		RESISTORS	
	R107, 108	1.5K ohm	2
	R114	1.8K ohm	1
	R113, 324, 325, 326,	2.2K ohm	4
	R329, 710	2.7K ohm	2
	R119, 317, 318, 704	5.6K ohm	4
	R327	8.2K ohm	1
	R323	10K ohm	1
	R102, 105, 312	12K ohm	3
	R109	15K ohm	1
	R328, 708	18K ohm	2
	R302, 333, 707	47K ohm	3
	R305	82K ohm	1
	R320, 321, 331	100K ohm	3
	R122	150K ohm	1
	R307	220K ohm	1
	R703	560K ohm	1
		CAPACITORS	
	C308	Ceramic, 1pF, ±0.25pF, 50V	1
	C107	Ceramic, 4pF, ±0.25pF, 50V	1
	C113, 118	Ceramic, 5pF, ±0.25pF, 50V	2
	C101, 111	Ceramic, 8pF, ±0.5pF, 50V	2
	C124	Ceramic, 8pF, ±0.5pF, 50V (N470)	1
	C314	Ceramic, 10pF, ±0.5pF, 50V	1
	C112, 127	Ceramic, 13pF, ±5%, 50V	2
	C106	Ceramic, 15pF, ±5%, 50V	1
	C114	Ceramic, 18pF, ±5%, 50V	1
	C102, 108	Ceramic, 20pF, ±5%, 50V	2
	C103	Ceramic, 30pF, ±5%, 50V	1
	C310	Ceramic, 30pF, ±5%, 50V	1
	C116	Ceramic, 47pF, ±5%, 50V	1
	C120	Ceramic, 75pF, ±5%, 50V	1
	C129	Ceramic, 200pF, ±5%, 50V (N220)	1
	C301, 717	Ceramic, 220pF, ±10%, 50V	2
	C109	Ceramic, 470pF, ±10%, 50V	1
	C706	Ceramic, 820pF, ±10%, 50B	1
	C117, 313	Ceramic, 0.001μF, ±10%, 50V	2
	C304	Ceramic, 0.0047μF, ±10%, 50V	1
	C311	Ceramic, 0.0056μF, ±10%, 50V	1
	C110, 119, 122, 131, 132, 133, 327, 712, 713, 714, 715, 718	Ceramic, 0.01μF, +80 -20%, 50V	12
	C105, 305, 309, 316, 322	Ceramic, 0.022μF, +80 -20%, 50V	5
	C134	Styrol, 250pF, ±5%, 50V	1
	C126	Styrol, 340pF, ±5%, 50V	1
	C123	Styrol, 0.002μF, ±5%, 50V	1
	C104, 302, 318, 319, 709, 710, 716	Semi conductive, 0.01μF, ±20%, 25V	7
	C303, 317, 323, 324, 325	Semi conductive, 0.022μF, ±20%, 25V	5
	C306, 326	Semi conductive, 0.039μF, ±20%, 25V	2
	C701, 702	Semi conductive, 0.047μF, ±20%, 25V	2
	C315	Semi conductive, 0.1μF, ±20%, 12V	1
	C125, 128	Mylar, 0.0047μF, ±20%, 50V	2
	C130	Mylar, 0.0022μF, ±20%, 50V	1
	C703, 707	Electrolytic, 1μF, 25V	2
	C320, 321	Electrolytic, 4.7μF, 25V	2
	C704, 705	Electrolytic, 220μF, 10V	2
	C708	Electrolytic, 1000μF, 10V	1
	C711	Electrolytic, 2200μF, 10V	1

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